

THE TECHNOLOGY REVIEW

RELATING TO THE MASSA-
CHUSETTS INSTITUTE
OF TECHNOLOGY



PUBLISHED AT
491 BOYLSTON STREET BOSTON BY THE
ALUMNI ASSOCIATION

technology review

Published by MIT

This PDF is for your personal, non-commercial use only.
Distribution and use of this material are governed by copyright law.
For non-personal use, or to order multiple copies please email
permissions@technologyreview.com.

ADVERTISING RATES

Quarterly Numbers Only.

Professional Card,	-	-	-	\$ 10 per year.
1/4 Page,	-	-	-	35 " "
1/2 " "	-	-	-	60 " "
1 " "	-	-	-	100 " "

Entire Nine Issues.

Professional Card,	-	-	-	\$ 16 per year.
1/4 Page,	-	-	-	56 " "
1/2 " "	-	-	-	96 " "
1 " "	-	-	-	160 " "

THE TECHNOLOGY REVIEW, 491 Boylston St., Boston

ROBERT H. RICHARDS ORE DRESSING

Makes careful concentrating tests for design of
flow sheets for different ores.

491 Boylston St. :: Boston, Mass.

Telephone, Haymarket 11

Walter H. Kilham, S.B. '89 Jas. C. Hopkins, S.B. '95

KILHAM & HOPKINS

ARCHITECTS :: 9 Park Street, Boston

THE ASSOCIATED GEOLOGICAL ENGINEERS

FREDERICK G. CLAPP, '01 MYRON L. FULLER, '96
331 FOURTH AVENUE, 131 STATE STREET,
PITTSBURG, PA. BOSTON, MASS.

Examinations and reports on oil, gas, and mineral
properties, water supplies, bridge and dam foundations,
cement and building stones, mining and treatment of
ores.

Bell. Tel. Main 1456.

AMASA M. HOLCOMBE, '04

Formerly Assistant Examiner U. S. Patent Office

ATTORNEY AT LAW

Patent and Trade Mark Causes

WITH

CARR & CARR

PATENT LAWYERS

Rooms 515-526 Roe Bldg.

510 Pine St.

ST. LOUIS, MO.

Main 5571 TELEPHONES Main 5572

CHARLES H. JOHNSON, '05

Representing

NEW ENGLAND MUTUAL
LIFE INSURANCE COMPANY

Of Boston, Massachusetts

Oldest Chartered Company in America. Obtain our
figures FIRST and not afterward.

176 FEDERAL STREET, BOSTON, MASS.

LORD ELECTRIC CO.

(Electric Contracting)

LORD CONSTRUCTION CO.

(Contracting Engineering)

LORD MFG. CO.

(Electric Manufacturing)

BOSTON (F. W. Lord, '93) NEW YORK

ELMER A. LORD & CO.

Insurance of every description

145 MILK ST., - BOSTON

Engineering Department

THOMAS E. SEARS, '03

Main 3148 — Telephones — Main 3147

EDWARD E. HOXIE, '03

ARCHITECT

622 Berkeley Building,

420 BOYLSTON ST., - - BOSTON

Telephone Back Bay 892. Opp. Rogers Building.

The Technology Review

VOL. XV

MARCH, 1913

No. 3

ARCHITECT FOR NEW BUILDINGS SELECTED

William Welles Bosworth '89 chosen for the work—Professor J. Knox Taylor '79 of Department of Architecture to be consulting Architect

The announcement of the architect of the New Technology by President Maclaurin was the central feature of the meeting of the council of the Alumni Association, February 17. The man selected is William Welles Bosworth, '89, of 527 Fifth Avenue, New York City,—with whom there will be associated Professor James Knox Taylor, '79 head of the department of architecture at the Institute.

The question will at once be asked by those not well acquainted with New York, "Who is Bosworth?" and it is simply necessary to remind such questioners that only four years ago they were asking, "Who is Maclaurin?" No one needs to ask that today, and the Institute has again showed its ability to seize upon the leaders of the immediate future. Bosworth is a product of the Institute in whom those who are prophets in architecture find the fundamentals and the achievements that make him the coming man, with his shadow already across the threshold.

In announcing the appointment of Mr. Bosworth, President Maclaurin said that the Institute has proceeded slowly with its plans for the new buildings across the Charles. With a considerable part of

the money needed for its buildings in hand it might easily have moved more rapidly, but its responsible officers have not allowed themselves to be forced by outside pressure to begin building until they are really ready to begin. The cautious policy will doubtless be justified by the results and in any case the President has indicated that for various reasons it would not be convenient for the Institute to vacate its present buildings before 1915. He told the alumni in New York at the reunion of a month ago that he expects the educational buildings to be ready in the fall of 1915, exactly fifty years after the completion of the Rogers Building on Boylston Street.

The information that Mr. Freeman has collected and digested, will afford to the architects the opportunity to proceed rapidly with their important work. Besides this material formally collected, the Institute can rely on a large body of alumni to bring their expert knowledge to the solution of special problems of construction and equipment.

William Welles Bosworth, the man who has been selected, began his architectural training in the Massachusetts Institute of Technology which he joined in

1886, being affiliated with the class of 1889. After leaving the Institute he entered the office of H. H. Richardson leaving it after eighteen months to become associated with Mr. Olmstead in landscape work for Leland Stanford University in California. Later, for two years he was on the staff of the *American Architect* and during this time made extensive studies of European architecture, especially in Rome. Opening his own office he designed various buildings including a number for the Hampton Normal and Agricultural Institute. He was soon after married, and later determined to devote several years to the broadening of his architectural training by study in the best schools of Europe. He went first to London where he worked under the stimulus of Alma Tadema, who captivated him by his sense of beauty and architectural form. This great master encouraged Mr. Bosworth to devote months of work to the study in the British Museum of Greek subjects. He went next to the Beaux Arts in Paris, where he entered the atelier of Godefroy and Fresnet. Here he soon gained a great local reputation. He next advanced to the atelier of Gaston Redon, a remarkably brilliant man, the architect for the Louvre, where he worked for three years.

He next spent considerable time working under Chaussemiche, who is now the architect of Versailles and the Trianon, going thence to Holland and for a considerable period to Rome. These prolonged studies gave him a foundation for his future work that today makes him one of the promising of the younger men in the profession. In fact, he has been

pronounced by one competent to judge, to be "a find for Technology, which thus selects from its own products one of the very best."

Returning to this country Mr. Bosworth entered the office of Carrère and Hastings, for whom he worked on the block plans of the Pan-American exposition. Later he went to the exposition as resident architect and was responsible for the design and construction of a considerable number of the buildings. He spent three years with this firm, going to Spain for local study and on his return opened his own office in New York.

He has been for several years designing the gardens of Mr. Rockefeller at Pocantico Hills, and all who have seen them recognize their exceptional beauty. In the last six years he has done much architectural work for John D. Rockefeller, Jr., for whom he is just completing a private residence in New York. This structure is remarkable for its classic simplicity, and a feature of all his later work has been the power of getting fine

effects by the simplest means. He dislikes complication and uses ornamentation only for some definite purpose and then only sparingly.

Frank A. Vanderlip, president of the National City Bank of New York is another for whom Mr. Bosworth has done residential designing, and for the state commission the architect designed the famous Letchworth Village. This is an institution for the state of New York, and includes now some eighty-five buildings,—industrial groups with workshops, schools, gymnasias, social centres, dining hall, nurses' home, power plant,



WILLIAM WELLES BOSWORTH, '89

utility buildings and an administration group.

The most important work upon which Mr. Bosworth is now engaged is the headquarters for the Western Union Telegraph Company in New York. This is a thirty-story building at the corner of Broadway and Dey Street, its material is white granite, and its cost between five and six million dollars. The building impresses those who have had the opportunity to view the plans and model, with its grand simplicity and the Western Union officials are enthusiastic over its fitness for their needs. Originality, good taste and this classic sense of simplicity are the features that have impressed themselves on Mr. Bosworth's clients as well as his efficiency in dealing with practical problems.

Mr. Bosworth seems to have precisely the characteristics and experience that Technology will need in the home beside the Charles. His landscape and exposition skill will find opportunity in the development of the grounds, simplicity and grandeur are demanded by the magnificent site, while, knowledge of large work and skill in handling the practical portions of the technique, completes a trinity of qualifications hardly ever to be looked for in the same individual.

Tech Receives Important Gifts

President Maclaurin announces an important gift amounting to twenty-five thousand dollars from the American Telegraph & Telephone Co. The tender is made by President Theodore N. Vail and is to include the sum of five thousand dollars annually for five years. The fund will be a special one to be devoted to the care, cataloguing and maintenance of the great electrical library given to the Institute within the year, and to the purchase of additional books.

The library, collected by Mr. Dering, an eccentric Englishman, is without question the most important collection of books and pamphlets bearing on electricity, was given to the Institute by the company, and through the circumstance of Mr. Vail's agency in the presentation

has come to be popularly set forth as the Vail library. It is in the possession of the Institute and in process of examination and cataloguing.

Another gift to Tech of even greater significance was foreshadowed at the same time by Mr. Vail in behalf of his company, an endowment of research in electricity. The American Telegraph & Telephone Co. has decided to support this work for five years and save that it is to be within the domain of electricity, there are no restrictions. The amount is yet to be finally determined, but from the attitude of the company and its president there is no question that it will be liberal.

In talking over the matter with President Maclaurin, President Vail said that he believes that the time has come when important firms and corporations realize the need of carrying on broad research, in which the outcome is not to be limited to the matters that seem too close to the business in which they are engaged. When such work is to be done there are evident advantages in committing it to an educational institution where experimental facilities are provided and where the results may be set forth free from bias of the commercial kind.

The electrical department of the Institute has been exceedingly fortunate the past year, for besides the library, valued at about one hundred thousand dollars and the twenty-five thousand for its maintenance, and the proposed gift by Mr. Vail's company, there has been given by the Edison Electric Illuminating Company, a guarantee of about ten thousand dollars for just such a broad work in research, as Mr. Vail indicates, while Edison himself and others have helped for various special investigations.

Major Briggs again Appointed

Announcement was recently made that Major Frank H. Briggs, '81, treasurer of the Advisory Council on Athletics, has been reappointed to the advisory committee of the New England Intercollegiate Athletic Association for a term of three years.

Technology Health Service

Through the efforts of the members of the department of public health and biology at the Institute, a coöperative health service has been established for the purpose of assisting the authorities of small towns contiguous to Boston in safeguarding public health. Prof. E. B. Phelps, '99, of the department is at the head of the movement which is now being operated in Wellesley and is to be extended to Belmont. A vote on the matter will be taken by the citizens of Framingham and Weston this month.

Professors Sedgwick, Gunn and Hoyt are also interested in the work. Mr. Hoyt is succeeding Mr. Schneider as health officer of Wellesley where the laboratory of the service is situated.

Among the things the service is now doing at a minimum cost and will continue, is a complete laboratory analysis of all the milk sold in a town it serves, as well as to conduct regular dairy inspections. Milkmen will be ranked in accordance with the grade of milk they sell. Cultures in cases of infectious diseases will be examined and chemical tests made of infected horses or cattle.

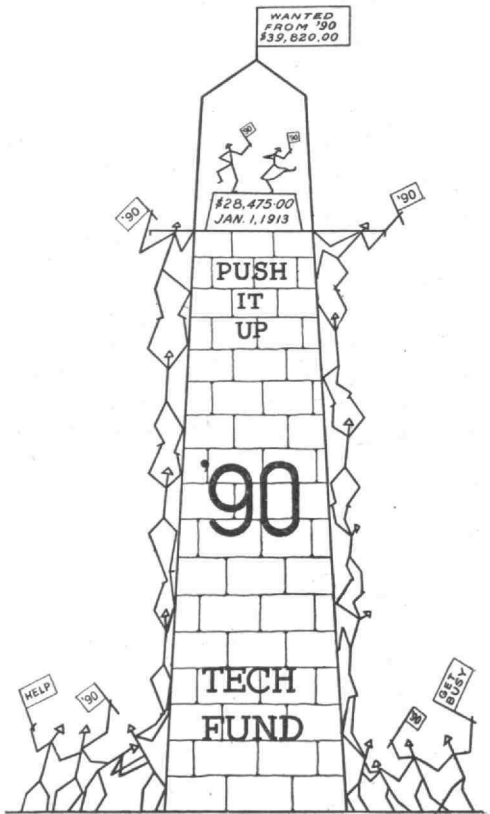
The service also plans to wage a campaign of extermination against mosquitoes.

R. N. Hoyt Comes to Tech

Robert N. Hoyt, '09, recently presented to the Board of Health of the borough his resignation as health officer of Princeton, N. J. With the resignation was a request that it be acted upon at an early date, as he wished to be released from his engagement to accept a position on the teaching staff of the department of biology and public health of the Institute. The Board of Health acted upon his resignation at its last meeting and accepted it with regret, releasing Mr. Hoyt in February.

Mr. Hoyt went to Princeton in October, 1911, and was the first to fill the position of health officer of Princeton. He is a graduate of the Institute and before

going to Princeton was health inspector of Summit, N. J. He has done much to plan and organize the work of his office in Princeton. In connection with his new position, Mr. Hoyt will be at the head of the health service of a group of suburban towns about Boston.



How the Class of '90 is booming the Fund

Despradelle Memorial

The Architectural and Architectural-Engineering Societies of the Institute of Technology recently held a joint meeting in memory of the late Prof. Désiré Despradelle, formerly head of the course of design at the Institute. P. D. Horgan, president of the Architectural Society, presided.

NEW MOVE BY TECH

To show rights of surrounding properties in relation to Boylston-Street holding—Petition court for a full ruling

In order that the Institute may know just where it stands in regard to the rights of abutting property owners with relation to the building restrictions on the Boylston Street Technology property, it was decided to have a new petition filed with the land court, asking that body to determine the nature, validity and extent of the easements, if any, which exist over the land. It is expected that the court will arrange a date for a full hearing of the situation.

The history of the Institute's land title case is a most interesting one. Prior to 1860 the Commonwealth filled and laid out in blocks the Back Bay lands, according to the scheme submitted to the Legislature in 1857. In some places there were certain special features, such as that on the block occupied now by Tech and the Boston Society of Natural History, intended to make larger open spaces and provide other things which would make them specially attractive as centres. By the Acts of 1861, chapter 183, the Legislature reserved the Tech-Natural History Society lot from sale forever. It was provided that the society was to have the use and control of one-third of the lot. Technology was incorporated and was given the use and control of the other two-thirds. It was further provided that neither holder should occupy with buildings more than one-third of the land controlled by each. At the same time the lots overlooking this block—twenty-two on Boylston street, the same number on Newbury street and two on Clarendon street (the two on Berkeley street having been sold previously)—were ordered appraised, along with the Tech-Natural History block and later the Boylston, Newbury and Clarendon-street block lots were sold by public auction, in pursuance to a custom followed for some years of disposing of the Back

Bay lands by auction and piecemeal. If enough extra could be provided by the appraisal of the lots mentioned to cover the previous tentative value of the block in the middle the occupants under the State's provisions were not to pay, and the following year Tech and the society were released from payment. The extra obtained by the appraisal is understood to have been around \$80,000 more than enough to offset the value of the middle block.

In 1903 the Legislature (chapter 438) reported to release certain rights that the State had in the Institute's land and granted to Tech and the grantees the State's rights, subject to the surrounding owners' rights, and the right to erect on all or any part of the premises. Technology soon afterwards started work under this act, which specified in its first section that the State released all of the proprietary rights that it had in the title and the interest remaining in the Commonwealth, subject to the rights, if any, of other parties and to the restrictions usual on the Back Bay lands sold by the State (Setback, etc.). When Tech started work the surrounding owners, or a number of them got together and asked for a bill in equity to restrain the school from building. The Supreme Court sustained, by a vote of 4 to 2, the remonstrants' petition and restrained Tech. In this proceeding the Natural History Society participated, but it was overruled by the Court and the decision was made on the strength of the contentions of the Newbury-street owners, property owners on Boylston street and Clarendon street being concerned also.

The Institute now seeks to have its title registered in the Land Court, and thereby determine what restrictions exist over its land.

Aaron H. Latham, trustee under the

will of Samuel F. McCleary, for the property at 169 Newbury street, a considerable distance up the street from the block occupied in part by Tech and entirely removed from a view of that block, has entered appearance. Trinity Church also is to appear in behalf of its corner at Boylston and Clarendon streets, in addition to the rental property which it has at the corner of Clarendon and Newbury streets, the latter having figured in previous proceedings. Mr. Latham's entry will bring up the issue of the rights, if any, of property some distance from Tech and not affording a view of the block, and Trinity's appearance for its church lot will involve the issue of rights for property overlooking the Tech block, but not involved in the original appraisalment under orders from the State.

First Meeting of the Alumni Council

The first meeting of the Alumni Council for the fiscal year was held at the University Club, February 15 with a large attendance. President Fay read a communication from President Maclaurin announcing the appointment of William Welles Bosworth as architect for the new buildings and Prof. James Knox Taylor of the architectural department, as consulting architect. The news was received with enthusiasm by the members of the council, some of whom are personally acquainted with Mr. Bosworth's attainments.

A discussion followed as to whether the regular Pop concert should be held at Symphony Hall or whether a smoker should be substituted for it. George Glidden, '93, who was chairman of the Pop Concert Committee last year, was decidedly in favor of the smoker. He thought the best thing to do would be to hire Mechanics Hall, employ a brass band and entertain the alumni with a vaudeville performance largely contributed by the undergraduates. This program was unanimously endorsed.

The proposal that a dinner be held in Boston for the benefit of those who could not attend the New York banquet was

voted down. The men who have been canvassing the subject were satisfied that it would be much better to concentrate all efforts on the smoker.

The chairman then spoke of the great desirability of a trip to the Pacific Coast by President Maclaurin. Mr. Fay has recently made a tour of the coast himself, visiting the various alumni associations and he spoke of their intense loyalty and the esteem in which the Institute is held by everyone on the Pacific Coast. He said that the President agreed fully with the desirability of making this trip and he expected to act on the suggestion as soon as he can be spared from the work incident to the planning of the new Institute.

The discussion of the finances of the association hinged on two things:—increasing the advertising in the *TECHNOLOGY REVIEW* and raising the membership dues of the association. A number of men present thought that the dues ought to be increased, perhaps five dollars; others argued that such a move would tend to decrease the number of applicants for membership. In regard to advertising it was said that a few years ago the class secretaries took this matter in hand and increased the advertising for the issue of January, 1909, from nine pages to sixty-three pages. It was agreed that the *REVIEW* was a useful medium for many classes of advertising and that a little interested work on the part of the members of the council and members in the classes to be appointed by them, could increase the revenue very largely. The matter of increasing dues was laid over to a future meeting.

President Fay suggested that a special night be devoted to the work of the undergraduates and the publicity arrangements of the Institute. This was heartily agreed to and it was decided to hold this meeting on March 31. The president of the Institute committee has been asked to arrange for the presentation of the work of the various departments of the Institute committee and Mr. John Ritchie, Jr., who has charge of the publicity of the Institute will tell about his work.

NUMBER OF SUBSCRIBERS SLOWLY INCREASING

Alumni Fund ought to pass the half-million mark this month—Class of '84 tops all others in number of subscribers

On March 1 the Alumni Fund had reached the amount of \$487,740.38 subscribed by 2,399 men or about 26 per cent. of the entire number.

The increase in the number of subscribers during February was small, only seventy-one new names being added.

By far the most creditable showing is made by the class of '84 which stood, December 2, number twenty-five in a list of forty-four classes. The report for February 1 showed that it had jumped up to the fourteenth place so far as numbers are concerned and on March 1 it was highest in the percentage of men subscribing, having reached 60.5 per cent. of the class enrollment.

Professor Gill, the class Fund representative, has secured during January and February, twenty-five subscribers, which is nearly one third of the total class membership. Taking into consideration only the percentage of members subscribing, '84 has jumped to first place and '81 takes second place, with but a little less than half the class subscribing; '74 takes third place with 41.3 per cent.; this percentage was given as 43.3 per cent. last month, in error; no additions since February 1. The classes follow along with '89 next, then '78, '10, '68, '85, '73, and '90. Professor Gill has devoted his efforts principally to showing his classmates that the spirit of the fund hinges rather on numbers than on the gross amount. Most of the gifts he has received are small, although some of them have been of larger proportions. The other classes have not shown any great increase in numbers. The class of '10 coming next with seven additional subscribers. The total amount received for February was \$7,000.

The following table shows the relative standing of the classes on March 1:

CLASS POINTS		CLASS POINTS	
1.	'78 9	23.	'95 46
2.	'85 10	24.	'96 46
3.	'68 12	25.	'80 48
4.	'81 12	26.	'75 49
5.	'10 16	27.	'07 49
6.	'90 17	28.	'05 54
7.	'89 18	29.	'04 55
8.	'88 20	30.	'83 56
9.	'93 20	31.	'94 56
10.	'84 23	32.	'69 63
11.	'09 24	33.	'92 66
12.	'76 31	34.	'98 66
13.	'91 32	35.	'70 67
14.	'97 33	36.	'01 71
15.	'08 33	37.	'72 73
16.	'79 38	38.	'77 74
17.	'71 40	39.	'03 74
18.	'11 40	40.	'87 76
19.	'82 41	41.	'02 77
20.	'06 41	42.	'00 79
21.	'73 46	43.	'86 81
22.	'74 46	44.	'99 82

The relative standing of the various geographical centers on March 1 was as follows:

1.	Canal Zone.....	4
2.	Hawaii.....	4
3.	Akron.....	7
4.	Cuba.....	8
5.	Japan.....	11
6.	Cleveland.....	19
7.	St. Louis.....	22
8.	Buffalo.....	23
9.	Portland.....	24
10.	Rochester.....	28
11.	Manila.....	29
12.	Pittsburgh.....	29
13.	Chicago.....	31
14.	Milwaukee.....	32
15.	Boston.....	33
16.	Minneapolis.....	33
17.	Indianapolis.....	34
18.	Connecticut.....	37

19. Schenectady.....	37
20. Syracuse.....	44
21. Wilmington.....	45
22. Texas.....	46
23. Detroit.....	48
24. Canada.....	50
25. Spokane.....	52
26. Los Angeles.....	53
27. Savannah.....	54
28. Fall River.....	58
29. New York City.....	58
30. Maine.....	59
31. San Francisco.....	63
32. Pittsfield.....	65
33. Birmingham.....	69
34. Tacoma.....	69
35. Philadelphia.....	71
36. Seattle.....	71
37. Steelton.....	71
38. New Hampshire.....	73
39. Providence.....	74
40. Tennessee.....	74
41. Atlanta.....	76
42. Massachusetts.....	81
43. Springfield.....	81
44. Cincinnati.....	84
45. Worcester.....	84
46. Columbus.....	85
47. Washington, D. C.....	87
48. Baltimore.....	92
49. Lowell.....	93
50. Mexico.....	94
51. Kansas City.....	96
52. Foreign.....	97
53. Denver.....	103
54. New Bedford.....	103
55. Vermont.....	110

Interesting Meeting in Philadelphia

A unique dinner was given in the club house of the Business and Professional Men's Club, at Chancellor and Camac streets, February 27, when the Technology Club of Philadelphia was host to about fifty graduates in naval architecture of the Massachusetts Institute of Technology. The banquet room had been transformed to represent the interior of a ship's cabin, and all the courses were served in true nautical style. The speeches were devoted to the improvement of the port of Philadelphia, the principal

speaker being Director Norris of the department of wharves, docks and ferries. Naval Constructor Frederick Coburn was toastmaster.

Outlining the needs of the port, Director Norris discussed at some length the suggested improvements and some of the pending legislation, especially the bill extending the right of eminent domain to land on the river front needed in port development. On the subject of proposed dock improvements the director said:

"The next improvement that will be made will be between Catharine and Christian streets, where I am now about completing negotiations that have been under way for about nine months, with three different owners, which will result in giving the city a piece of ground there, on which it will be possible to make a start for an improvement something on the line of the so-called Chelsea piers on the North River, New York, from Twelfth to Twenty-third streets.

"I think this will be a distinct improvement in the appearance of Delaware Avenue, and will transform what is at present a most uninviting looking spot in the central river front into one of the best looking and most valuable."

The director showed an architect's drawing of the proposed construction of these piers, and explained that about \$1,600,000 of the cost will be defrayed out of last year's loan bill and \$200,000 out of other funds of the department.

Others speakers included Naval Constructors J. A. Furer, '05, and Frederic Coburn, '08, who discussed the many advantages of League Island Navy Yard; Colonel D. A. Lyle, '84, J. A. Adams and Benjamin Blakeman.—*Philadelphia Record*.

THE ADVERTISING POSSIBILITIES OF THE REVIEW ARE WORTH INVESTIGATION — ITS LIST OF PATRONS IS GROWING

ALUMNI NIGHT

AT THE

BOSTON OPERA HOUSE

THURSDAY, APRIL 17, 1913

ON THE OCCASION OF THE PRODUCTION
OF THE TECH SHOW

"MONEY IN SIGHT"

SEE NOTICES LATER

Alumni Night at the Opera House

Ever since the first Tech Show was given there has been a strong desire on the part of the alumni to attend it, but as the metropolitan theatres could not be secured for evening performances, no opportunity has been given. At the earnest request of many alumni the management of the Tech Show announces that it has secured a lease of the Boston Opera House for Thursday afternoon and evening, April 17. The play is entitled "Money in Sight," and is written by J. Murray Hastings, '13, and E. Menderson, '13. The music and lyrics are all contributed by undergraduates and this year the entire mechanical conduct of the show will be in the hands of the students. This will include orchestra, scene shifting, spotlights, and everything going to make up the performance.

The Tech Show has the reputation of being the best college show given in the country and each succeeding performance has been something of an improvement on its predecessor. The coach is Mr.

Eugene Sanger of New York who has also been coach for the Triangle Club of Princeton and a number of the more prominent college shows.

Besides appearing in Boston, the show will perform at Northampton, Malden and probably Providence, R. I.

The securing of the Opera House gives the alumni a long desired opportunity to see what the Tech Show is like and it is proposed to make this a social event long to be remembered. It is possible the show may not be able to secure the Opera House another year as it is usually leased to the Aborn Opera Company at that time. Never before has there been an opportunity for so many Tech alumni and their friends to get together under similar circumstances and the Alumni Association is preparing to take up the matter and coöperate with the undergraduates fully. The notices will be sent to alumni in the vicinity of Boston within a short time giving full particulars in regard to the show as well as procedure in regard to securing tickets.

THE TECHNOLOGY CLUBS ASSOCIATED

President King outlines plan and scope of the new organization—Second meeting to be held in Chicago in 1914

A new organization, the Technology Clubs Associated, a federation intended to comprise in its membership all Technology clubs, was formed at the mass meeting at the Technology reunion in New York City, January 17, 1913.

Its object, as stated in the constitution then adopted, is "to promote the general interest and social relations between the various Technology clubs and to assist in spreading information concerning the Massachusetts Institute of Technology."

General meetings, at which the place of the following meeting is to be designated, are to be held annually or as otherwise determined by the executive committee of the federation, which committee includes the president, who may be *ex-officio* a vice-president of the Alumni Association, six vice-presidents, a secretary-treasurer who is the secretary-treasurer of the Alumni Association, and an associate secretary.

The constitution, which contains the provision that its amendment is subject to the approval of the executive committee of the Alumni Association, received the unanimous approval of the Alumni Council, and the words therein that the president may be *ex-officio* a vice-president of the Alumni Association were inserted, as it is proposed by the council to present an amendment to the constitution of the Alumni Association to provide that the president of the Technology Clubs Associated shall be a vice-president of the association, constituting a third vice-president of the association, thus assuring the Technology Clubs Associated a voice in the affairs of the Alumni Council.

At the mass meeting in New York there were present delegates or representatives of the following alumni clubs: Albany, Buffalo, Central New York, Merrimack

Valley, Pittsburgh, Puget Sound, Technology Club of New York.

Such delegates or representatives ratified the constitution, designated Chicago, as formally requested by the Northwestern Association, as the place of the next meeting, named Boston as the place of meeting in 1915, and elected the officers of the federation.

It is now earnestly desired by the officers that, as soon as may regularly be done, every Technology club be enrolled as members and join in the objects of the new federation, so that the work of the Technology Clubs Associated during the year, including plans for the next reunion to be held in Chicago, may progress to successful completion.

This announcement and invitation has accordingly been sent to the secretary of each alumni club, that he may at once bring the subject before the officers or governing board of the club and be authorized to send to the secretary-treasurer of the Technology Clubs Associated the membership card, and thus all the local alumni clubs be enrolled as members of the new organization.

When full membership is secured, the benefits of the federation to all will be augmented and its officers will be in a position to proceed with various branches of work that give promise of mutual gain, among which the following have been suggested:

1. That the secretary-treasurer of the Technology Clubs Associated endeavor to send information to the secretaries of local clubs of the names and addresses of Technology men who move into the territory of the local clubs, and to furnish such men with the names and addresses of secretaries of local clubs, the secretaries to endeavor to inform the secretary-treasurer of the federation of the names

and new addresses of men who change to new territory.

2. That the secretary-treasurer endeavor to send simultaneously to secretaries of local clubs news items concerning the Institute, the secretaries of local clubs to endeavor to make arrangement with local newspapers for the publication of such news items.

3. That the secretary-treasurer endeavor to inform secretaries of local clubs when officers of the Institute, professors and prominent alumni will be in the different cities, so that meetings may be arranged and statements made of recent events concerning the Institute, alumni associations and work of alumni.

4. That the secretary-treasurer endeavor to furnish to secretaries of the local clubs prompt reports of the meetings of the Alumni Council, which are to be held on the third Monday of each month, and receive from the local secretaries and present at subsequent meetings of the council expressions of opinion of the local clubs concerning the subjects of such reports, as well as concerning any subject deemed to affect the Institute or the alumni, thus giving opportunity to the local associations to be heard on current and vital matters.

5. That the secretary-treasurer of the federation obtain from the secretaries of the local clubs and preserve data concerning all local clubs, including membership, plan of organization, dues, nature and frequency of meetings, names of men who have taken prominent part in alumni matters in the locality, etc., such data to be available for the use of local clubs, in the formation of new local associations and in connection with the annual meetings of the Technology Clubs Associated.

To secure in the highest degree these and other benefits the prompt coöperation of all the local clubs is essential; and it is hoped and believed that the various clubs will not only see to it that they are at once enrolled as members of the new federation, but will continue to aid in the attainment of its objects, thus developing the solidarity and influence of

the alumni and advancing the interest of the Institute. WILLIAM H. KING, '94,

President Technology Clubs Associated.

Consider New Clubhouse

Members of the Technology Club, of New York composed of the alumni of the Massachusetts Institute of Technology, have under active consideration the erection of a new clubhouse, and it is understood that options on a site in the vicinity of Forty-second Street have been secured for that purpose.

The club also has an alternative proposition, that of remodelling its present clubhouse at No. 17 Gramercy Park South, which will be enlarged by the erection of an extension on the rear in the event that the new building idea is deemed undesirable.

The present clubhouse is a four-story structure, originally erected for dwelling purposes, and covers a plot 33 x 134, adjoining the home of the Columbia University Club, at the southwest corner of Irving Place, facing Gramercy Park. The remodelled home of the National Arts Club is separated from the home of the Technology Club by the Players' Club property.

Mrs. Mary Gerard, wife of Justice James W. Gerard, is the owner of the realty occupied by the Technology club. The club's officers are G. W. Kittredge, president; Walter Large, secretary, and Ira Abbott, treasurer.—*N.Y. Evening Post.*

Boat Club Formed

Notwithstanding the serious handicap that the students are under in attempting to carry out any rowing program, a boat club has recently been formed and officers elected. The men interested in rowing have a great desire to keep up the interest until the Institute shall be located on the banks of the Charles where it is hoped greater facilities will be offered. Since the introduction of rowing at the Institute the crew has made an excellent record. The crew owns one shell and will make its headquarters at the Boston Athletic Association Boat House.

ALUMNI PLANS FOR THE YEAR

President Fay outlines some of the work to be done by the Alumni Association in message sent to council

In the four years of its existence the Alumni Council has done notable and effective work and it has taken an important place in the affairs of the Institute. So far the council has considered only the more urgent matters that have presented themselves. The opportunity for service is such, however, that at the beginning of the new year we may properly review the work in hand and outline, in part at least, the work for the coming year. Heretofore the council has met at irregular intervals, although recently the meetings have been held as often as once a month during the school year. It now seems desirable that the council meet regularly, and the executive committee has voted that council meetings be held on the third Monday of each month from October to May, inclusive. Consequently meetings for the coming year will be held February 17, March 17, April 21, May 19, October 20, November 17, December 15, 1913, and January 19, 1914. The next annual meeting of the council will be held on the latter date.

FINANCES.—The Alumni Association, which a few years ago was merely a social body, has grown to be a business organization with a considerable office staff. Last year the business of the association amounted to \$22,000, of which \$6,500 was devoted to the publication of the *REVIEW*, \$4,700 for the general work of the Alumni Association, including the expenses in connection with the Pop concert and the banquet, and the balance for outside work, of which the Institute paid \$2,140, the Alumni Fund Committee paid \$4,400, and classes and other organizations made up the remainder.

The staff of the Alumni Office performs a considerable and varied amount of work. It maintains the records of former students, of whom alphabetical, class and geographical card catalogues are

kept, and it prepares data for the *Register of Former Students*. It sends out all the alumni notices and carries on the administrative work in connection with the annual banquet and Pop concert. It does a considerable amount of general clerical and stenographic work for the officers of the Institute, as well as the Institute's mailing work, all of which is done practically at cost, as the Institute furnishes the association with a room for headquarters, rent free. The office staff also does work for the various classes and other alumni organizations and for the Alumni Fund Committee, which work is done at a small profit. In addition, the Alumni Association publishes the *TECHNOLOGY REVIEW* which is under the direction of a paid editor, who is assisted by the office staff. The paid officers and assistants of the office at the present time are the secretary, the editor of the *TECHNOLOGY REVIEW*, the chief clerk of the Alumni Office, two stenographers, four clerks and an office boy. The total payroll of officers and assistants amounts to \$5,686 per year. By doing outside work the association is enabled to maintain an office staff adequate to handle its business at all times.

In 1912 the income and expenditure of the association were about equal. In 1913 the association will have increased expenses on account of the work for the Technology Clubs Associated, and in addition money should be spent in sending speakers to the meetings of local associations. More money is needed and means must be devised for increasing the revenue of the association. Various suggestions have been made to accomplish this end; one, that the dues be raised from two dollars to three dollars per year; another, that it may be possible to collect a larger percentage of dues from members. In 1910 only 38 per cent. of the membership

of the Alumni Association paid dues, while last year the percentage was raised to 56 per cent.

Probably the most fruitful means for increasing the revenue of the association is in securing more advertising for the TECHNOLOGY REVIEW. In October, 1908, the REVIEW had but nine pages of paid advertisements; in January, 1909, by a strenuous campaign, sixty-three pages of paid advertisements were secured. In the issue for January, 1913, under normal conditions, there are seventeen pages of paid advertisements; but if a part of the work and enthusiasm which were put into the January, 1909, REVIEW can be given this year, the REVIEW advertising can be substantially increased above its present amount.

INCREASE IN MEMBERSHIP OF THE ALUMNI ASSOCIATION.—At the present time the membership of the Alumni Association consists of 4,871 graduates and 1,553 former students who are not graduates. There remain 3,400 former students who are eligible for membership upon election by the executive committee. Last year the membership was increased by the addition of 258 graduates and by the election of 381 other former students. One of the important questions to be considered by the council is, "How can new members be secured and their interest and that of present members be retained?"

It has been suggested that to get new members much might be accomplished through committees in the local associations, who, by personal work among the men in their respective localities, would probably accomplish far more than would be accomplished by sending out notices through class secretaries or through the Alumni Office.

LOCAL ALUMNI ASSOCIATIONS.—At the New York Reunion a most important step was taken in uniting the local alumni organizations into a federation called the Technology Clubs Associated, whose purpose is "to promote the general interest and social relations between the various Technology clubs and to assist in spreading information concerning the Massachusetts Institute of Technology."

The president of the federation is William H. King, '94, vice-president of the Alumni Association, and among the other officers the secretary of the Alumni Association is *ex-officio* secretary of the federation. Meetings of the same character as the New York reunion are to be held annually, and it is proposed to hold the meeting in 1914 in Chicago. This federation will work in a field which heretofore has not been adequately covered by the Alumni Association, and by strengthening the interest in outside organizations between each other and in the Institute the federation can, and undoubtedly will, accomplish a most important work. Certain changes in the constitution and by-laws of the Alumni Association are necessary to coördinate properly the work of this federation with that of the Alumni Council.

THE PRESIDENT SHOULD GO TO THE PACIFIC COAST.—The local alumni clubs in the eastern part of the country keep in touch with affairs at the Institute through the presence at their meetings of President Maclaurin or other Institute representatives. West of the Mississippi Valley, however, and especially on the Pacific coast there are large numbers of Tech men who rarely see men from Boston or get direct news from the Institute other than by correspondence. These men should be made acquainted with all the latest developments at Technology, that the fame of the institution, already high in their section, may be still further enhanced through the work of the alumni. It seems to be important that President Maclaurin make this spring an extended trip to the alumni centers of the far West, in order that not only the alumni but the people of that section may see the President and learn, at first hand, of Technology's great development. It is fitting that the council, representing all the alumni, should formally urge the President to make this trip.

THE COUNCIL'S WORK IN CONNECTION WITH THE NEW TECHNOLOGY.—In planning the New Technology the President and Corporation welcome the suggestions and the coöperation of the alumni. Alumni advice has been requested upon

the Walker Memorial, upon the provision for housing and feeding the students and upon the gymnasium and provisions for athletics. Committees are at work in formulating plans for these portions of the New Institute, and at early meetings of the council these committees will report and the subjects will be fully discussed, after which the council will make recommendations to the Corporation.

THE COUNCIL'S PARTICIPATION IN MATTERS OF EDUCATIONAL POLICY OF THE INSTITUTE.—The council has already considered and reported upon matters of educational policy, such as proposed courses on refrigeration and aëronautics. It has provided the Institute with a thoroughly equipped summer camp of surveying for the civil engineering department, by which the work of that department has been materially advanced. At the present time, the council through a special committee is considering the advisability of establishing a new course in business administration. This committee will probably report its conclusions to the council at an early meeting, when full discussion of the report will be had.

THE COUNCIL'S CONNECTION WITH SOCIAL AND ATHLETIC LIFE OF THE STUDENTS.—Through the Advisory Committees on *The Tech*, the Tech Show, and athletics, the council maintains a close touch with the more important undergraduate activities, and has succeeded in placing the finances of these activities on a business basis.

THE TECH SHOW.—Each year the undergraduates produce a creditable show which is comparable with some of the best productions of the professional stage. Because of the difficulty of securing any local theater for an evening performance, the shows have been given heretofore in the afternoon, at a time when the attendance of alumni was necessarily very limited. This year it has been suggested that the Boston Opera House be secured in order that the show may be presented in the evening. If this is done, the council should take action to bring the matter to the attention of the alumni, and the show should be made an alumni

society event, as it is already the event of the season for the undergraduates.

UNDERGRADUATES MEETING OF THE COUNCIL.—That the council may be enlightened regarding the character, amount and variety of the present student activities at the Institute, it has been suggested that one meeting be made an "Undergraduates Night," at which representatives of the various undergraduate activities will describe briefly the work of each. At this meeting, too, something might be told of the publicity work of the Institute. On account of the number of matters to be considered at the regular council meetings, a special evening for this meeting may be necessary.

MEETINGS OF BOSTON ALUMNI.—In view of the fact that this year the annual dinner of the Alumni Association was held in New York, there has been no general meeting of alumni in Boston, and some men here are suggesting the feasibility of holding a Boston meeting this winter. Such a meeting might or might not take the form of a dinner. In this connection a further suggestion has been made that at graduation an alumni smoker be substituted for the usual Pop concert. Both suggestions are to be considered at the February meeting of the council. Another question to be settled is whether the annual dinner of the association in 1914 is to be held in Boston or in some other city.

THE NEXT TECH REUNION.—Two general reunions of alumni were held in 1904 and 1909, and following precedent the next would naturally follow in 1914. On account of the fiftieth anniversary of the opening of the Institute and because it is expected the new buildings will then be nearing completion, it has been suggested that the next reunion be postponed until 1915. Furthermore, the Technology Clubs Associated propose a general meeting in Chicago in 1914 similar to the recent successful gathering in New York. The council should fix definitely the time of the next reunion.

CLASS ACTIVITIES.—The Alumni Association through its secretary, should collect data regarding the publication of class

directories, so that any class seeking to publish a class book can profit by the experience of other classes. The association should also collect data regarding available places for class reunions, their accessibility, cost of transportation, the size and cost of accommodations, the facilities offered, and the like. Another matter in which the classes can coöperate with the association is in preparing lists of Tech men throughout the country who are active workers and who may be brought into Alumni Committee work, particularly work in connection with the Technology Clubs Associated and the next general Tech reunion.

BUSINESS DIRECTORY OF TECH MEN.—All over the country Tech men are found in charge of, or in responsible connection with, large engineering undertakings and business enterprises. These men are seeking expert advice and are purchasing supplies both of which other Tech men have to offer. Other things being equal, Tech men would deal with each other if information concerning them could be compiled in proper form. A classified directory of Tech men would be of great mutual benefit. The council, through a committee, might well consider the subject, particularly the form which such a directory should take and the method of financing the undertaking. This committee should also report on the feasibility of preparing this directory now or at a later date.

THE ALUMNI FUND.—The Alumni Fund on February 13 amounted to \$484,726.38 from 2,361 subscribers. While the amount is gratifying, only twenty-five per cent. of the former students have contributed, and there remain nearly 7,000 men yet to be heard from. To these men it must be made clear that although the Institute has received over six million dollars in less than two years, nearly all of this money is restricted to special uses, and to it must be added a further sum in excess of two million dollars to complete the necessary building and equipment of the New Institute. No one expects the Alumni Fund to reach the two million mark; on the other hand, if the raising of money from outsiders is to be made easy,

the Alumni Fund must be substantially increased and the number of subscribers should be doubled. The council and the local alumni organizations should coöperate with the Alumni Fund Committee and its representatives all over the country toward a more thorough personal canvass. It is not what a man gives, but the fact that he gives *something*, that now counts toward the success of the Fund.

PUBLICITY.—Greater publicity of Technology affairs is needed among the alumni and the general public. With reference to the general Institute news there has been notable improvement in the last few years, and the Institute is now given considerable space in papers throughout the country. The news bureau service, which is sent to the Associated Press, is sent also to the secretaries of all local organizations. It is believed that the council meetings should be reported in the public press, and furthermore that full reports of the meetings should be sent promptly to local societies, from whom expressions of opinion should be sought upon important matters under discussion by the council. In this connection the local societies should be urged to hold stated meetings between the dates set for council meetings, and when such meetings are not held, the council reports might be received by local standing committees representing the societies, these committees to give their personal views upon matters pending in the council. Greater publicity both in the public press and among the local associations will serve to increase the power, usefulness and dignity of the council.

FREDERIC H. FAY, *President*.

Tech May Get Large Bequest

By the will of the late Mr. C. C. Weld, of Newport, R. I., the Boston Lying-In Hospital receives \$125,000, and the Boston Dispensary \$100,000, while the residuary estate, valued at nearly \$4,000,000, is in case the daughter of the decedent dies without issue, to be divided between the Massachusetts General Hospital and the Massachusetts Institute of Technology.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Boston, Mass.

THE MASSACHUSETTS INSTITUTE OF TECHNOLOGY aims to give thorough instruction in *Civil, Mechanical, Chemical, Mining, Electrical, and Sanitary Engineering; in Chemistry, Electrochemistry, Architecture, Physics, Biology and Public Health, Geology, and Naval Architecture.*

To be admitted to the Institute, the applicant must have attained the age of seventeen years and must pass examinations in algebra, plane and solid geometry, physics, history of the United States (or ancient history), English, French and German. Preparation in some one of a series of elective subjects is also required. A division of these examinations between different examination periods is allowed. In general, a faithful student who has passed creditably through a good high school, having two years' study of French and German, should be able to pass the Institute examinations.

Graduates of colleges, and in general all applicants presenting certificates representing work done at other colleges, are excused from the usual entrance examinations and from any subjects already satisfactorily completed. Records of the College Entrance Examination Board, which holds examinations at many points throughout the country and in Europe, are also accepted for admission to the Institute.

Instruction is given by means of lectures and recitations, in connection with appropriate work in the laboratory, drawing-room or field. To this end extensive laboratories of chemistry, physics, biology, mining, mechanical engineering, applied mechanics, and the mechanic arts, have been thoroughly equipped, and unusual opportunities for field-work and for the examination of existing structures and industries have been secured. So far as is practicable, instruction is given personally to small sections rather than by lectures to large bodies of students.

The regular courses are of four years' duration, and lead to the degree of Bachelor of Science. In most courses the work may also be distributed over five years by students who prefer to do so. Special students are admitted to work for which they are qualified; and the degrees of Master of Science, Doctor of Philosophy, and Doctor of Engineering are given for resident study subsequent to graduation. Opportunity for research is offered in all the departmental laboratories, in the three recently established Research Laboratories of Applied Chemistry and Physical Chemistry, and in the Sanitary Research Laboratory and Sewage Experiment Station.

The tuition fee not including breakage in the laboratories, is \$250 a year. In addition, \$30 to \$35 per year is required for books and drawing materials.

For catalogues and information, address

ALLYNE L. MERRILL, *Secretary of the Faculty,*

491 Bolyston Street, Boston.

STONE & WEBSTER

CHARLES A. STONE, '88

EDWIN S. WEBSTER, '88

RUSSELL ROBB, '88

HENRY G. BRADLEE, '91

ELIOT WADSWORTH

DWIGHT P. ROBINSON, '92

JOHN W. HALLOWELL

Securities of Public Service Corporations

Stone & Webster Engineering Corporation

(INCORPORATED)

CONSTRUCTING ENGINEERS

DWIGHT P. ROBINSON, '92	President and General Manager
HOWARD L. ROGERS, '93	First Vice-President and Treasurer
GEORGE O. MUHLFELD	Vice-President and Construction Manager
FREDERIC N. BUSHNELL	Vice-President and Engineering Manager
GEORGE C. ENGLAND	Controller
ROBERT E. HAMILTON	General Purchasing Agent

Stone & Webster Management Association

(INCORPORATED)

GENERAL MANAGERS OF PUBLIC SERVICE CORPORATIONS

HENRY G. BRADLEE, '91	President
FREDERICK S. PRATT	Vice-President
FREDERICK P. ROYCE, '90	Vice-President
CHARLES F. WALLACE, '92	Vice-President
HENRY B. SAWYER	Treasurer

GENERAL MANAGERS OF

The Lowell Electric Light Corporation.
The Seattle Electric Company.
Puget Sound Electric Railway Company.
Tacoma Railway and Power Company.
Columbus Electric Company.
Cape Breton Electric Company, Ltd.
El Paso Electric Company.
Jacksonville Traction Company.
Ponce Electric Company.
Paducah Traction and Light Company.
Puget Sound International Railway & Power Company.
Edison Electric Illuminating Company of Brockton.
Houghton County Electric Light Company.
Brockton and Plymouth Street Railway Company.
Houghton County Traction Company.
Savannah Electric Company.
Pacific Northwest Traction Company.
Eastern Texas Electric Company.
Fort Worth Southern Traction Company.
Dallas Electric Corporation.

Northern Texas Electric Company.
The Electric Light and Power Company of Abington and Rockland.
Blackstone Valley Gas & Electric Company.
The Blue Hill Street Railway Company.
Tampa Electric Company.
Pensacola Electric Company.
Houston Electric Company.
Fall River Gas Works Company.
Galveston Electric Company.
Pacific Coast Power Company.
The Key West Electric Company.
Baton Rouge Electric Company.
Whatcom County Railway & Light Company.
Galveston-Houston Electric Company.
Haverhill Gas Light Company.
Sierra Pacific Electric Company.
Mississippi River Power Company.
Puget Sound Traction, Light & Power Company.

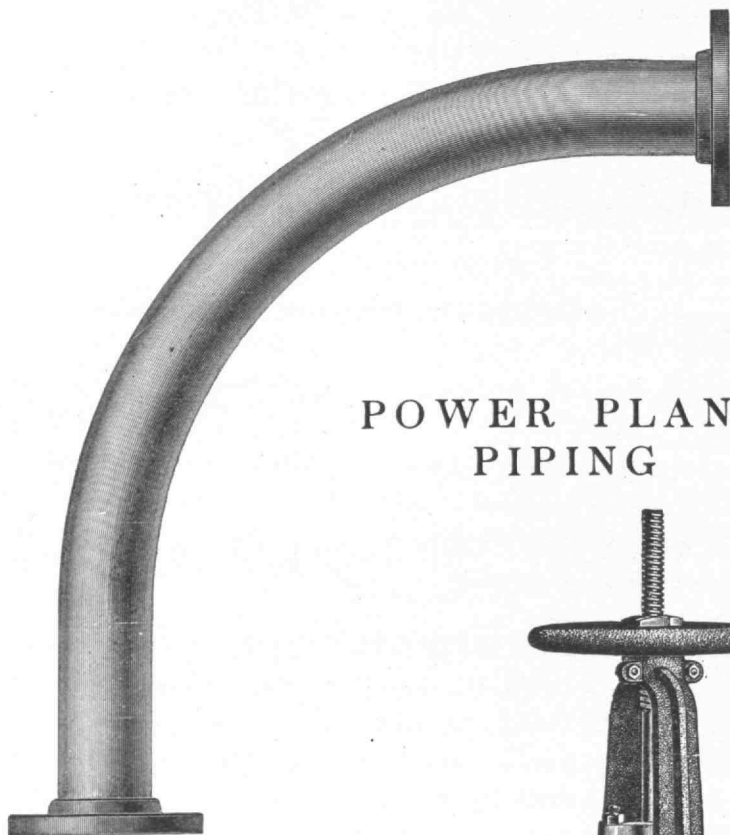
STONE & WEBSTER BUILDING

147 MILK STREET, BOSTON, MASSACHUSETTS

5 NASSAU STREET, NEW YORK

FIRST NATIONAL BANK BLDG., CHICAGO, ILL.

WALWORTH
MANUFACTURING COMPANY
BOSTON, U. S. A.

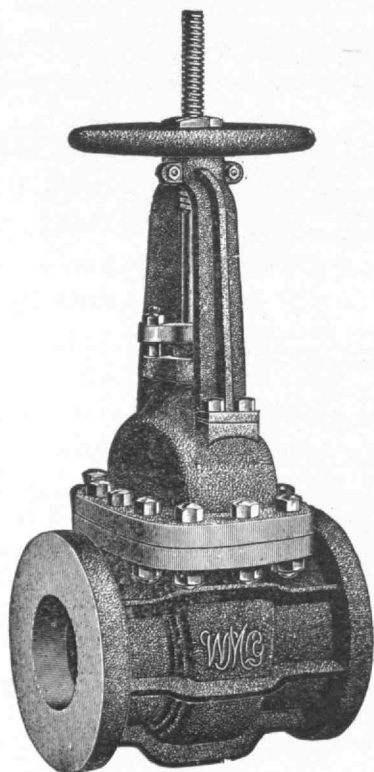


POWER PLANT
PIPING

Extra Heavy
Valves and Fitting for
High Pressure Plants

Walmanco
Pipe Joints

GENERAL OFFICES
132 Federal Street



FINE INKS & ADHESIVES

For those who KNOW



HIGGINS'

Drawing Inks
 Eternal Writing Ink
 Engrossing Ink
 Taurine Mucilage
 Photo Mounter Paste
 Drawing Board Paste
 Liquid Paste
 Office Paste
 Vegetable Glue, etc.

Are the Finest and Best Inks and Adhesives

Emancipate yourself from the use of corrosive and ill-smelling inks and adhesives and adopt the Higgins' Inks and Adhesives. They will be a revelation to you, they are so sweet, clean, well put up, and withal so efficient.

At Dealers Generally

CHAS. M. HIGGINS & CO., Mfrs.

271 Ninth Street Brooklyn, N. Y.

Branches: Chicago, London.

FELT
 FLAGS

M. I. T. SOUVENIRS

\$1.25



Banners
 for Dens

\$1.25



Bronze
 Seals

Silver
 and
 Gold Pins

\$1.00



T
 Buttons

Steins

\$0.75



Fobs

Pillows

\$0.75



Song
 Books

\$0.75, Silk T. Flags.

\$0.50 Felt T. Flags.

A. D. MacLachlan 502-504 Boylston
 Street Boston

Distinctive Lubricating Qualities

are possessed by Dixon's Flake Graphite that no other lubricant shares. It perfectly resists heat and cold, acids and alkalis. It goes direct to friction's cause, microscopic roughness of metal surfaces, and supplies a smooth, durable, veneer-like coating that reduces friction and wear, prevents cutting and seizing. Write for "Graphite as a Lubricant."
 —Sent free.

Joseph Dixon Crucible Co., Jersey City, N. J.

THE TECHNOLOGY ARCHITECTURAL RECORD

DEVOTED TO

THE STUDY OF ARCHITECTURE AND TO THE WELFARE OF
 THE DEPARTMENT OF ARCHITECTURE OF THE
 MASSACHUSETTS INSTITUTE OF TECHNOLOGY

Published Quarterly by the M. I. T. Architectural Society

Subscription rate, One Dollar per Volume

ARTHUR D. LITTLE, Inc.

Laboratory of Engineering Chemistry

93 Broad Street,



Boston

A. D. LITTLE, '85, President
H. J. SKINNER, '99, Vice-President

H. S. MORK, '99, Treasurer
C. F. WOODS, Secretary

The purpose of this organization of **CHEMISTS** and **ENGINEERS** is that of securing to its clients **INCREASED INDUSTRIAL EFFICIENCY** in material and processes :: :: :: :: ::

In addition to its general service covering Inspection, Analyses, Physical and Electrical Tests, and Technical Reports, the laboratory is prepared, through its large staff of specialists, to undertake any work involving the application of chemistry to industry.

WEBSTER HEATING

- ¶ For securing positive exhaust steam circulation in a large building or from a central plant the Webster Vacuum System should be used.
- ¶ For the smaller and medium size buildings, residences, etc., the Webster Modulation System is recommended.
- ¶ The Modulation Valve, by means of which ready control of the amount of heat emitted by each radiator is secured, is equally applicable to either Webster System.
- ¶ Almost any two-pipe system may be altered to a Webster System with marked increase in comfort and economy.
- ¶ Over 100 buildings in Boston alone are successfully heated by Webster Systems.

Warren Webster & Company

AIR WASHERS

STEAM SPECIALTIES

CAMDEN, N. J.

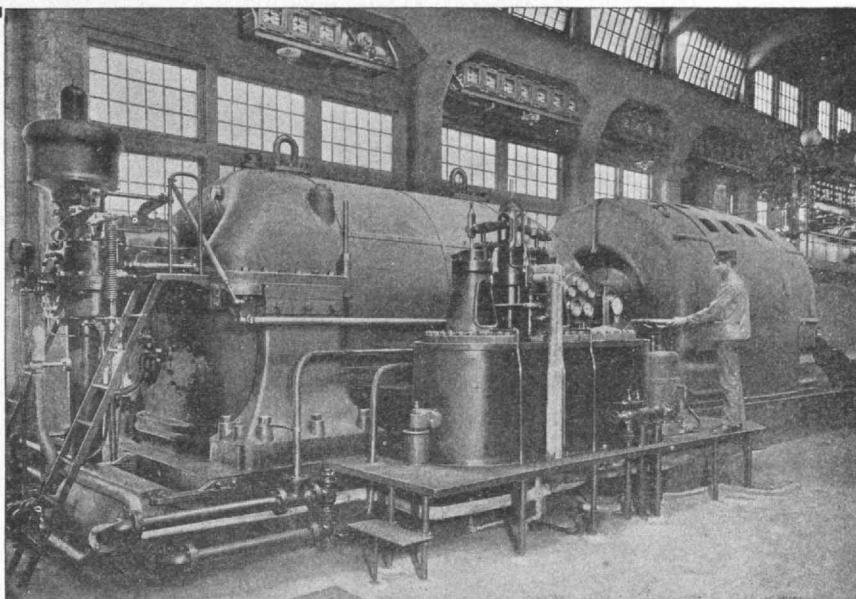
OFFICES IN ALL PRINCIPAL CITIES

New England Manager, WILLIAM G. SNOW, 24 Milk Street, Boston

Established 1888

Over 6000 Installations

26-2



This 10,000 Kw. normal rated turbo-generator unit has a Rankine Cycle Efficiency of 68.9% overall, which is the American Record.

The Westinghouse Machine Co.,

East Pittsburgh, Pa.

PRIME MOVERS AND AUXILIARIES



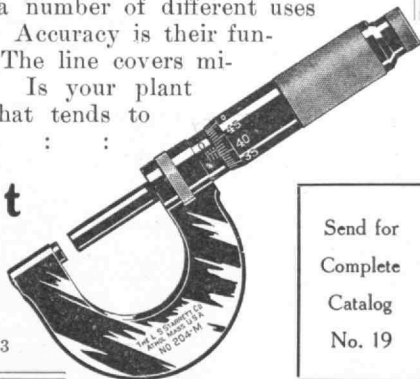
Increased Production

Increased production is the aim of all Tech graduates who are in charge of manufacturing plants. One way to help is to have all the mechanics provided with

Starrett Tools

These tools are designed each for a number of different uses and are made to stand years of service. Accuracy is their fundamental; convenience, their feature. The line covers micrometers, levels, calipers, rules, etc. Is your plant taking advantage of every method that tends to increase production? : : : : :

**The L. S. Starrett
Company
Athol, Mass.**



Send for
Complete
Catalog
No. 19

PRINTING

Books, Magazines, Catalogs

OUR SPECIALTY: PROMPT SERVICE

Rumford Press

CONCORD,
NEW HAMPSHIRE



Trade Mark Reg. U. S. Pat. Off.

Samson Solid Braided Cord

All Kinds, Sizes and Colors

Cotton, Linen, Italian Hemp

Samson Spot Cord. Extra quality guaranteed. We are glad to send samples and full information.



Trade Mark Reg. U. S. Pat. Off.

Samson Cordage Works, Boston, Mass.

James P. Tolman, '68, *President*
Herbert G. Pratt, '85, *Treasurer*



SANITAS MANUFACTURING CO.

MANUFACTURERS OF

FINE PLUMBING FIXTURES

52-54 UNION ST.,
BOSTON

WORKS AT
WAKEFIELD, MASS.

38-40 WEST 32nd ST.
NEW YORK

WALLACE C. BRACKETT, '95, GEN. MGR.

Accuracy in Measurements
is Best Obtained Through the Use of

LUFKIN

MEASURING
TAPES

The more severe the test, the better their showing. Sold by
all dealers. Catalog sent on request

THE LUFKIN RULE CO.
SAGINAW, MICH., U.S.A.

New York
London, Eng.
Windsor, Can.

